नमामि पंचगंगा नदी कृती आराखड्यांच्या अंमलबजावणीसाठी मान्यता देण्याबाबत..

महाराष्ट्र शासन
पर्यावरण व वातावरणीय बदल विभाग
शासन निर्णय क्रमांकः ईएनव्ही-२०२५/प्र.क्र.३२(३)/तां.क.३
१५ वा मजला, नविन प्रशासकीय भवन,
मंत्रालय, मुंबई - ४०० ०३२.
दिनांक - ३० एप्रिल, २०२५

प्रस्तावना -

पंचगंगा नदी ही कासारी, कुंभी, तुळशी, भोगावती व सरस्वती या भूमिगत प्रवाहापासून एकत्र मिळून प्रयाग संगम येथे उगम पावते. पंचगंगा नदी ही कृष्णा नदीची एक प्रमुख उपनदी असून पंचगंगा नदी कोल्हापूरहून वाहत जावून नरसोबावाडी येथे कृष्णा नदीस मिळते.

कोल्हापूर ते शिरोळ पर्यंत नदीच्या पट्ट्याची लांबी ही ६७ कि.मी. असून या पट्ट्यामध्ये नदीवर कोल्हापूर आणि इचलकरंजी महानगरपालिका, कुरुंदवाड, शिरोळ, हुपरी व हातकणंगले या ४ नगरपरिषदा/नगरपंचायती व अन्य १७४ छोटी मोठी गावे नदीकाठावर वसलेली आहेत. तसेच सदर नदीपट्ट्यामध्ये मोठ्या प्रमाणात औद्योगिकरण झालेले आहे.

केंद्र शासनाच्या राष्ट्रीय जलगुणवत्ता मोजमाप योजनेनुसार देशातील नद्यांचे नियमितपणे सर्वेक्षण करून नदी प्रदूषणाच्या उतरत्या क्रमानुसार राज्यातील प्रदूषित नदी पट्ट्यांचे प्राथम्य क्र १ ते ५ असे वर्गीकरण करण्यात येते. त्यानुसार महाराष्ट्र प्रदूषण नियंत्रण मंडळामार्फत सन २०२४ मध्ये केलेल्या सर्वेक्षणानुसार महाराष्ट्रातील पंचगंगा नदीमधील शिरोळ ते कोल्हापूर या नदीपट्ट्याचा समावेश प्राथम्य क्र. ३ मध्ये करण्यात आला आहे. त्यानुषंगाने पंचगंगा नदीमधील प्रदूषित नदीपट्याचे व पर्यायाने पंचगंगा नदीचे प्रदूषण कमी करण्याकरीता पंचगंगा नदी कृती आराखडा तयार करण्याची बाब पर्यावरण व वातावरणीय बदल विभागाच्या १०० दिवसांच्या कार्यक्रमांतर्गत समाविष्ट करण्यात आली होती.

त्यानुषंगाने महाराष्ट्र प्रदूषण नियंत्रण मंडळामार्फत नमामि गंगेच्या धर्तीवर व्यापक कृती आराखडा राबवण्याच्या अनुषंगाने सांडपाणी प्रक्रिया सुधारणा, औद्योगिक सांडपाणी नियंत्रण, कचरा व्यवस्थापन सुधारणा व अन्य अनुषंगिक उपाययोजनांचा समावेश करून याबाबतचा कृती आराखडा शासनास सादर करण्यात आला आहे. महाराष्ट्र प्रदूषण नियंत्रण मंडळाने सादर केलेल्या नमामि पंचगंगा कृती आराखड्यास मान्यता देऊन सदर कृती आराखड्याची अंमलबजावणी करण्याकरीता संबंधित स्थानिक स्वराज्य संस्था/ प्राधिकरणे यांना कालबध्द कृती कार्यक्रम तयार करणेबाबत निर्देश देण्याची बाब शासनाच्या विचाराधीन होती. या अनुषंगाने शासन पुढील प्रमाणे निर्णय घेत आहे.

शासन निर्णय -

१. पर्यावरण व वातावरणीय विभागाच्या अंतर्गत असणाऱ्या महाराष्ट्र प्रदूषण नियंत्रण मंडळामार्फत तयार करण्यात आलेला व सोबत **परिशिष्ट-१** मध्ये जोडण्यात आलेला नमामि पंचगंगा नदी कृती आराखडा अंमलबजावणीकरीता संबंधित स्थानिक स्वराज्य संस्था / प्राधिकरणे यांना पाठविण्यास मान्यता देण्यात येत आहे.

२. **कृती आराखडा अंमलबजावणी यंत्रणा** - सदर कृती आराखड्याच्या प्रभावी अंमलबजावणीच्या अनुषंगाने संबंधित शासकीय विभाग, शासन यंत्रणा शासकीय मंडळे व पंचगंगा नदीकाठावर असलेल्या सर्व स्थानिक स्वराज्य संस्थांना सदर कृती आराखड्यामध्ये समाविष्ट सांडपाणी प्रक्रिया सुधारणा, औद्योगिक सांडपाणी नियंत्रण, कचरा व्यवस्थापन सुधारणा व अन्य अनुषंगिक उपाययोजनांची अंमलबजावणी विहित कालावधीमध्ये करणे बंधनकारक राहील. सदर आराखड्याच्या प्रभावी अंमलबजावणीसाठी पंचगंगा नदीकाठावरील सर्व संबंधित स्थानिक स्वराज्य संस्था व आवश्यकतेनुसार संबंधित शासन यंत्रणा शासकीय मंडळे त्यांच्या कार्यक्षेत्रामध्ये अंमलबजावणी यंत्रणा म्हणून काम पाहतील. सर्व संबंधित शासकीय विभाग, मंडळे व स्थानिक स्वराज्य संस्था यांनी सदर विहित कृती आराखड्याची कार्यक्षम अंमलबजावणी सुनिश्चित करावी असे निर्देश देण्यात येत आहेत.

३. **कृती आराखडा संनियंत्रण यंत्रणा** - सदर आराखड्याच्या प्रभावी अंमलबजावणीसाठी संबंधित विभागीय आयुक्त यांच्या अध्यक्षतेखाली विभागीय कार्यकारी समिती गठीत करणेबाबत आवश्यक कार्यवाही विभागीय आयुक्त यांनी करावी. सदर समितीमध्ये संबंधित जिल्हाधिकारी, जिल्हा परिषद मुख्य कार्यकारी अधिकारी, संबंधित महानगरपालिका आयुक्त, जलसंपदा विभागाचे प्रतिनिधी, संबंधित नगरपरिषद /नगरपंचायतीचे मुख्याधिकारी, महाराष्ट्र प्रदूषण नियंत्रण मंडळाचे व महाराष्ट्र औद्योगिक विकास महामंडळाचे प्रतिनिधी, कार्यक्षेत्रामध्ये काम करणाऱ्या पर्यावरण विषयक स्वयंसेवी संस्थांचे किमान २ प्रतिनिधी तसेच विभागीय आयुक्त यांना अन्य आवश्यक वाटतील अशा प्रतिनिधींचा समावेश असेल. सदर विभागीय कार्यकारी समितीमार्फत कृती आराखड्याच्या अंमलबजावणीचे सनियंत्रण करण्यात येईल. त्यानुषंगाने आराखड्याच्या प्रभावी अंमलबजावणीसाठी आवश्यक बैठकांचे आयोजन करणे, संबंधित ठिकाणी भेटी देणे, आवश्यक मार्गदर्शन करणे, सर्व संबंधित यंत्रणा व स्थानिक स्वराज्य संस्था यांना वेळोवेळी आवश्यक निर्देश देणे तसेच एकंदरीत आराखड्याचे संनियंत्रण करणे इत्यादी कार्यवाही सदर समितीमार्फत करण्यात येईल.

४. **कृती आराखडा पर्यवेक्षकीय व देखरेख (मॉनिटरींग) यंत्रणा** - सदर आराखड्याची विहित कालमयदित प्रभावी अंमलबजावणी करण्यासाठी महाराष्ट्र प्रदूषण नियंत्रण मंडळ पर्यवेक्षकीय व देखरेख (मॉनिटरींग) यंत्रणा म्हणून काम करेल. सदर आराखड्याच्या अंमलबजावणीच्या अनुषंगाने आवश्यक तांत्रिक सहाय्य/मार्गदर्शन संबंधित शासकीय यंत्रणा व स्थानिक स्वराज्य संस्थांना महाराष्ट्र प्रदूषण नियंत्रण मंडळामार्फत वेळोवेळी उपलब्ध करून देण्यात येईल.

५. **कृती आराखडा आवश्यक निधीची तरतूद** - सदर आराखड्यामध्ये समाविष्ट सांडपाणी व्यवस्थापन, घनकचरा व्यवस्थापन व अन्य अनुषंगिक उपाययोजनांच्या अनुषंगाने विविध विभागामार्फत राबविण्यात येणाऱ्या योजनांमधून प्राधान्याने निधी उपलब्ध करून देण्यात यावा. संबंधित प्रशासकीय विभागाने त्यांच्या अखत्यारीतील योजनांमधून निधी वितरीत करताना प्रदूषित नदी पट्ट्यामध्ये प्रस्तावित प्रकल्पांना प्राधान्य देण्यात यावे संबंधित अंमलबजावणी यंत्रणांनी त्यांना आवश्यक निधी हा संबंधित प्रशासकीय विभागाकडे आवश्यक प्रस्ताव पाठवून आवश्यक त्या तांत्रिक व प्रशासकीय मान्यता घेऊन त्यानुसार उपलब्ध करून घ्यावा.

संबंधित जिल्ह्यामध्ये कार्यरत विविध उद्योगांच्या कंपनी सामाजिक दायित्व (सीएसआर) व कंपनी पर्यावरण दायित्व (सीईआर) निधीमधून या कार्माकरीता आवश्यक निधी उपलब्ध करून घेण्याबाबतचा निर्णय विभागीय आयुक्त यांच्या अध्यक्षतेखाली गठीत समितीने घ्यावा. सदर प्रकल्पांकरीता उद्योगांचा कंपनी सामाजिक दायित्व (सीएसआर) व कंपनी पर्यावरण दायित्व (सीईआर) निधी या कामाकरीता

वापरावयाचा झाल्यास याबाबतचे स्वतंत्र बँक खाते जिल्हाधिकारी कार्यालयाद्वारे तयार करण्यात यावे. सदर बँक खात्याच्या अनुषंगाने वेळोवळी लेखापरीक्षण करून घेण्यात यावे. अशा प्रकारे सदर कृती आराखड्याच्या अंमलबजावणीसाठी आवश्यक निधी शासनाच्या विविध विभागाच्या योजना तसेच कंपनी सामाजिक दायित्व (सीएसआर) व कंपनी पर्यावरण दायित्व (सीईआर) मधून प्राप्त निधी यांचे एकत्रित अभिसरण (Convergence) करून उभारण्यात यावा. तथापि, असे करताना कोणत्याही कामाच्या खर्चाची पुनरावृत्ती होणार नाही, याची दक्षता घेण्यात यावी.

संबंधित प्रशासकीय विभागांनी नदी संवर्धन हे राष्ट्रीय कर्तव्य गृहीत धरून सदर बाबीचे प्राथम्य विचारात घेता सदर आराखड्याच्या अनुषंगाने समाविष्ट उपाययोजनांसाठी संबंधित अंमलबजावणी यंत्रणांकडून प्राप्त प्रस्तावांना प्राधान्याने मान्यता देणे आवश्यक राहील.

६. **कृती आराखडा अंमलबजावणी कालमर्यादा** - नमामि पंचगंगा नदी कृती आराखड्यामध्ये विहित केलेल्या कालमर्यादनुसार तीन वर्षाच्या आत (सन २०२८ पर्यंत) सदर आराखड्यामध्ये समाविष्ट उपाययोजना टप्याटप्याने पूर्ण करणे संबंधित शासकीय विभाग/ यंत्रणा स्थानिक स्वराज्य संस्था/ शासकीय मंडळे यांच्यावर बंधनकारक राहील.

७. **कृती आराखडा शासन स्तरावरील सनियंत्रण यंत्रणा** - सदर कृती आराखड्याच्या अंमलबजावणीबाबतचा अहवाल संबंधित विभागीय आयुक्त यांनी वेळोवेळी पर्यावरण व वातावरणीय बदल विभाग तसेच महाराष्ट्र प्रदूषण नियंत्रण मंडळास सादर करावा. सदर आराखड्याच्या अनुषंगाने कृती आराखड्यातील समाविष्ट कामांच्या प्रगतीबाबत आढावा हा दर तीन महिन्यांनी अ.मु.स./ प्र.स./ सचिव, पर्यावरण व वातावरणीय बदल विभाग यांच्या अध्यक्षतेखाली घेण्यात येईल.

८. **कृती आराखडा नियामक आणि देखरेख उपाय** - जल (प्रदूषण प्रतिबंध व नियंत्रण) अधिनियम, १९७४ व त्यामध्ये वेळोवळी केलेल्या सुधारणांनुसार तसेच घनकचरा व्यवस्थापन नियम, २०१६ मधील तरतूदींनुसार प्रदूषण नियमांचे पालन न करणाऱ्या तसेच प्रदूषणास कारणीभूत ठरणारे उद्योग / स्थानिक स्वराज्य संस्था/व्यक्ति यांच्यावर कायद्यातील विहीत तरतूदींनुसार आवश्यक कारवाई करणेबाबतची दक्षता संबंधित यंत्रणेने घ्यावी. प्रदूषण कर्त्यांनी प्रदूषक देय तत्व (Polluters to Pay) म्हणजेच प्रदूषणासाठी जवाबदार असणाऱ्या व्यक्ती किवा संस्थेने प्रदूषणामुळे होणाऱ्या नुकसानीचा खर्च स्वतःच सोसावा असा नियम आहे. या तत्त्वाअंतर्गत प्रदूषण कर्त्यांवर कारवाई करण्यात यावी.

९. **विविध शासकीय विभागामार्फत करावयाची कार्यवाही** - सदर कृती आराखड्यामध्ये समाविष्ट केल्यानुसार शासनाच्या विविध विभागाकडे दर्शविण्यात आलेल्या उपाययोजना या संबंधित शासकीय विभाग जसे नगर विकास विभाग, उद्योग विभाग, जलसंपदा विभाग, कृषि विभाग व अन्य आवश्यक विभाग यांच्यामार्फत विहित कालमर्यादेत राबविण्यात येतील, याबाबत संबंधित विभागांनी आवश्यक दक्षता घ्यावी.

१०. **सार्वजनिक सहभाग आणि जागरूकता** - संबंधित शासकीय कार्यालये/ मंडळे / स्थानिक स्वराज्य संस्था यांनी स्थानिक नागरिक, पर्यावरण क्षेत्रामध्ये काम करणाऱ्या स्वयंसेवी संस्था, स्थानिक मंडळे, शाळा, महाविद्यालये यांना सदर आराखड्याच्या प्रभावी अंमलबजावणीच्या अनुषंगाने सहभागी करून घ्यावे.

११. सर्व मंत्रालयीन विभागांनी उपरोक्त शासन निर्णय त्यांच्याशी संबंधित स्थानिक यंत्रणेच्या निदर्शनास आणून देऊन सदर कृती आराखड्याची अंमलबजावणी करण्याबाबत सूचना देण्यात याव्यात.

१२. सदर शासन निर्णयातील सूचना या पर्यावरण संरक्षण अधिनियम, १९८६ मधील कलम ५ नुसार पर्यावरण संरक्षणासाठी व प्रदूषण रोखण्यासाठी करावयाच्या उपाययोजनांच्या अनुषंगाने देण्यात आलेले निर्देश समजण्यात यावेत.

सदर शासन निर्णय महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा संकेतांक २०२५०४३०१४०९०४३००४ असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकित करून काढण्यात येत आहे.

महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

CHANDRAKANT ARUN VIBHUTE

Digitally signed by CHANDRAKANT ARUN VIBHUTE
DN: c=IN, o=GOVERNMENT OF MAHARASHTRA, ou=ENVIRONMENT AND CLIMATE CHANGE DEPARTMENT, 2.5.4.20=d772c1c0413f707cb062d972b2618cf3943831624f050badd4bd9aea24219790, postalCode=400032, st=Maharashtra, serialNumber=B37242131913CE4AD7FFA0CAA314C8163271F8AF6410B5DFF1FC5B4C3CC19B76, cn=CHANDRAKANT ARUN VIBHUTE
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(चंद्रकांत विभूते)
उप सचिव, महाराष्ट्र शासन

प्रत –

१. मा. मुख्यमंत्री यांचे प्रधान सचिव, मंत्रालय, मुंबई ३२.
२. मा. उपमुख्यमंत्री (नगर विकास) यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
३. मा. उपमुख्यमंत्री (वित्त व नियोजन) यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
४. मा. विरोधी पक्ष नेते, महाराष्ट्र विधान परिषद, यांचे खाजगी सचिव, विधानभवन, मुंबई.
५. मा. मंत्री, पर्यावरण व वातावरणीय बदल विभाग यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
६. मा. मंत्री, ग्राम विकास विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
७. मा. मंत्री, जलसंपदा विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
८. मा. मंत्री, जलसंधारण विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
९. मा. मंत्री, पाणी पुरवठा व स्वच्छता विभाग, यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
१०. मा. पालकमंत्री, कोल्हापूर जिल्हा यांचे खाजगी सचिव, मंत्रालय, मुंबई ३२.
११. महालेखापाल (लेखा व अनुज्ञेयता) महाराष्ट्र राज्य (मुंबई व नागपूर).
१२. मुख्य सचिव, महाराष्ट्र शासन, मंत्रालय, मुंबई ३२.
१३. अ.मु.स./प्रधान सचिव/सचिव, नियोजन विभाग मंत्रालय, मुंबई ३२.
१४. अ.मु.स./प्रधान सचिव/सचिव, वित्त विभाग मंत्रालय, मुंबई ३२.
१५. अ.मु.स./ प्रधान सचिव/सचिव, नगर विकास विभाग (२) मंत्रालय, मुंबई ३२.
१६. अ.मु.स./प्रधान सचिव/सचिव, उद्योग विभाग, मंत्रालय, मुंबई ३२.
१७. अ.मु.स./प्रधान सचिव/सचिव, पर्यावरण विभाग मंत्रालय, मुंबई ३२.
१८. अ.मु.स./प्रधान सचिव/सचिव, ग्राम विकास विभाग मंत्रालय, मुंबई ३२.
१९. अ.मु.स./प्रधान सचिव/सचिव, जलसंपदा विभाग मंत्रालय, मुंबई ३२.
२०. अ.मु.स./प्रधान सचिव/सचिव, जलसंधारण विभाग मंत्रालय, मुंबई ३२.
२१. अ.मु.स./प्रधान सचिव/सचिव, पाणी पुरवठा व स्वच्छता विभाग मंत्रालय, मुंबई ३२.

२२. सदस्य सचिव, महाराष्ट्र प्रदूषण नियंत्रण मंडळ, सायन, मुंबई.
२३. मुख्य कार्यकारी अधिकारी, महाराष्ट्र औद्योगिक विकास महामंडळ, मुंबई.
२४. आयुक्त तथा संचालक नगरपरिषद प्रशासन संचालनालय, वरळी, मुंबई.
२५. संचालक (निरी), नागपूर.
२६. विभागीय आयुक्त, पुणे.
२७. जिल्हाधिकारी, कोल्हापूर.
२८. मुख्य कार्यकारी अधिकारी, जिल्हा परिषद, कोल्हापूर.
२९. आयुक्त, कोल्हापूर महानगर पालिका.
३०. आयुक्त, इचलकरंजी महानगरपालिका.
३१. मुख्याधिकारी कुरुंदवाड, शिरोळ, हुपरी, हातकणंगले नगरपरिषद / नगरपंचायत, जि. कोल्हापूर.

परिशिष्ट१-

ACTION PLAN

FOR CLEAN-UP OF POLLUTED STRETCH OF

PANCHGANGA RIVER

2025

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PANCHGANGA RIVER (Shirol to Kolhapur)

1.1 Executive Summary of Action Plan Restoration of Water Quality of Panchanga River

Sr. No.	Description of Item		Details
1.	Name of the identified polluted river and its tributaries	:	Shirol to Kolhapur
2.	Is river is perennial and total length of the polluted river	:	Perennial Length- 67 Km
3.	Priority-2018 by CPCB Priority No-V Revised priority as per as per CPCB Report 2022- Panchganga River removed from Priority List by CPCB in 2022 Latest Priority 2024 study by MPCB	:	Priority-2018 by CPCB Priority No-V Revised priority as per as per CPCB Report 2022- Panchganga River removed from Priority List by CPCB in 2022 Latest Priority 2024 study by MPCB- Priority-IV
4.	No of drains contributing to pollution and names of major drains	:	21 nos of major drains. The characteristics and details are provided in detail below.
5.	Major Towns on the banks of the river with population	:	**Local Body** / **Population** Kolhapur: 6,67,000 Ichalkaranji: 3,91,000
6.	a. Sewage generation & Treatment in MLD	:	**Kolhapur Municipal Corporation:** Sewage Generation : 149.1 MLD Sewage Treatment: 106.7 MLD **Ichalkaranji Municipal Council:** Sewage Generation: 40 MLD Sewage Treatment: 20 MLD **Other villages (ZP):** Sewage Generation: 19.69 MLD Sewage Treatment: NIL
	b. Total no. of existing STPs and proposed STPs with total capacities in MLD	:	**Kolhapur Municipal Corporation:** 02 nos of STPs located at Kasaba Bavada, Kolhapur (Capacity 76 MLD & 4.0 MLD) and Dudhali area, Kolhapur (Capacity 17 MLD). **Ichalkaranji Municipal Council:** 01 STP located at Sangali Naka, Near MSW site, Ichalkaranji (Capacity 20 MLD)

	c. Gaps in sewage treatment in MLD and no. of towns not having STPs	:	Kolhapur – 42.4 MLD Ichalkaranji – 20.0 MLD Other villages (ZP) – 19.69 MLD
7.	Major industrial estates located with total no. of industries	:	Total 107 nos of industries located in the Panchganga river basin Sugar Industries: 08 nos.

			Sugar and Distillery Units: 15 nos. Textile units: 81. Other units: 11. CETPs: 03 nos having capacities of 12 MLD, 1 MLD and 10 MLD
	a. Total water consumption and total industrial effluent generation in MLD	:	Industrial Effluent Generation: Approx 18.30 MLD. Treatment: 18.30 MLD in individual ETPs and 03 nos of CETP.
	b. No. of industries having captive ETPs	:	107 effluent generating industries have captive ETPs
	c. No of CETP's and their treatment capacity	:	03 nos having capacities of 12 MLD, 1 MLD and 10 MLD
	d. Gaps in treatment of industrial effluent	:	None
8.	Waste Management	:	
	a. Solid Waste Generation & processing	:	**Kolhapur Municipal Corporation:** MSW Generation : 210 MT/day MSW Treatment: 200 MT/day by Composting, Bio Methanization, RDF, Waste to Energy (0.2 MW) Dumping: 10 MT/day **Ichalkaranji Municipal Council:** MSW Generation: 140 MT/day MSW Treatment: 40 MT/day by composting Dumping: 100 MT/day
	b. Biomedical Waste Generation & treatment	:	Kolhapur District: Total Biomedical waste generated: 2152 kg/day. Total Biomedical waste treated: 2152 kg/day
	c. E-Waste Management Generation & treatment	:	E-waste generated by industries is sent to MPCB authorized E-waste reprocessor

	d. Hazardous waste Management	:	• There are 192 Hazardous waste generating industries in Kolhapur district. These industries generated about 23783 MT Hazardous waste in year 2024-25. • The HW from Kolhapur district is scientifically disposed through Maharashtra Enviro Power Ltd., MIDC Ranjangaon, Dist. Pune. • CHWTSDF capacity – Landfill – 60000 MT/A, Incineration – 3 TPA.

9.	Action plan includes mainly covering aspect such as (Proposal for utilization of sewage, ground water recharging or rain water harvesting, measures for regulating ground water use, protection and management of flood plain zone, maintaining minimum E-flows and water shed management, plantation on both sides of the river, setting up of bio-diversity parks etc., as per Hon'ble NGT Orders dated 20.09.2018 and 19.12.2018)	:	• RRC has already requested to Water Resource Dept, GoM for maintaining minimum E-flows and water shed management, plantation on both sides of the river, setting up of bio-diversity parks. • Water resource department, GoM has prepared integrated State Water Plan, which includes recycling of Treated sewage. • MPCB - Action plan for Utilization of Treated Sewage has been submitted to CPCB.
10.	Min. and Max. required time period for implementation of action plans		Max: 3 years
11.	Total estimated budget in crores towards implementation of proposed action plans with break-up (e.g. No. of STPs, capacity, total cost; No of CETPs, total capacity, Cost towards interception and diversion of sewage/effluent to STPs/CETPs etc.,)	:	Four STPs with capacity 6 MLD, 9 MLD, 15 MLD & 19.50 MLD at Kolhapur costing Rs. 70.77 crores One STP of capacity 18 MLD at Ichalkaranji costing Rs 50 Crores. The Maharashtra Pollution Control Boards has also reserved Rs. 461.42 Cr. for preparation of action plan for abetment & Control of Pollution of River Water due to sewage & solid waste disposal from B & C Municipal Councils (342 Nos of Urban Local Bodies.), Nagar Panchayat & Gram Panchayats. The said funds will be used for DPR preparation, development of infrastructure for sewage collection & treatment & development of infrastructure for Solid Waste Management. The DPR preparation & implementation of the same will be completed by year 2028 (i.e in next 3 years).

12.	Whether 'River Rejuvenation Committee (RRC) constituted by the State Govt./UT Administration and If so, Date of constitution of 'RRC'.	:	River Rejuvenation Committee (RRC) constituted as per the Maharashtra Government G.R. issued by the Environment Dept, GoM vide No. NGT 2018/PC-2/TC-3 dtd.13.12.2018.
13.	Responsible Organisation (s) for implementation of proposed action plans	:	1. Water Resource Department, GoM 2. Urban Development Department 3. Kolhapur Municipal Corporation 4. Ichalkaranji Municipal Council
14.	Expected deliverables w r to achieving Goals	:	1. To achieve 100% sewage collection and treatment 2. To achieve 100% MSW collection, transportation and treatment.
			3. To achieve river water quality of Bathing standards by 2028. 4. Augmentation of River Flow and restoration of water quality-2028

5.	Initiatives taken by Govt. of Maharashtra and MPCB.	:	• Maharashtra Government through its forest department has announced The Plantation Program. • MPC Board will provide financial & technical assistance to villages in next three years to comply with sewage & waste management. • MPC Board has issued Direction to the local bodies to make 25% budgetary provision for scientific treatment and disposal of Sewage and Solid Waste. Accordingly, Municipal Corporations have passed resolution in their General Body meeting and reserved the funds. These funds are reserved and made mandatory to utilize for preparation of DPR, establishing treatment facility, O & M of treatment facility etc. The review of the same is taken from time to time by the Board. • MPC Board has issued directions to 08 Municipal Corporations to penalize to the tune of 1pais/litre of sewage generation under 'Polluter pays principle'. • MPC Board has issued directions to non-complying CETPs to penalize to the tune of 2 paisa/litre for remediation & upgradation to comply with the consented standards.

	Budget Estimates & Pooling of Resources from Local Bodies, State Pollution Control Board, State Government & Central Government		• Maharashtra Government will provide necessary funds in next 3 years i.e. by 2027 for Sewage management. • The Maharashtra Pollution Control Boards has also reserved Rs. 461.42Cr. for preparation of action plan for abetment & Control of Pollution of River Water due to sewage & solid waste disposal from B & C Municipal Councils (342Nos of Urban Local Bodies.), Nagar Panchyat & Gram Panchayat for reducing polluted stretches in compliance with Hon'ble NGT, principal bench directions w.r.t. "More River Stretches are now Critically Polluted". The said funds will be used for DPR preparation, development of infrastructure for sewage collection & treatment & development of infrastructure for Solid Waste Management. The DPR preparation & implementation of the same will be completed by year 2028 (i.e in next 3 years). • The Maharashtra Government through Urban Development Department has approved DPR of all Urban Local Bodies for Solid Waste Management. The funds for the same amounting to Rs. 2560.0Cr has been already approved by Government & the said DPRs will be implemented & Solid Waste Management issues will be resolved by 2027.

Preamble -

In the matter of OA No. 673 of 2018-"More river stretches are critically polluted now: CPCB", the Hon'ble NGT has passed order dated 20.09.2018 for constitution of River Rejuvenation Committee (RRC) and Special Environment Surveillance Task Force (SESTF). The report comprises 351 polluted river stretches in India out of which 53 polluted river stretches are in Maharashtra. In the state, 9 polluted stretches in priority I & 6 polluted stretches in priority II. It has been mandated to prepare Action Plan for River Stretches and make them pollution free. In compliance of the orders of the Hon'ble NGT, the State Government has constituted RRC.

River Rejuvenation Committee (RRC) constituted as per the Maharashtra Government G.R. issued by the Environment Dept, GoM vide No. NGT 2018/PC-2/TC-3 dtd.13.12.2018 with 5 members under the guidance of Principal Secretary for preparation of action plans and to monitor the implementation of these action plans. The members of RRC are as mentioned under:

1. Commissioner / Director, Directorate of Municipal Administration
2. Chief Executive Officer – Maharashtra Industrial Development Corporation
3. Director (Environment)
4. Director (Industries)
5. Member Secretary – Maharashtra Pollution Control Boards- Member & Co-ordinator of RRC

Further State Government also constituted District Level Special Task Force comprising of the following:

1. Representative of District Collector
2. Representative of District Superintendent of Police
3. Representative of Regional Officer, MPCB
4. Representative of the District Judge of the concerned District

Meetings of the RRC Committee:

- 1st Meeting of River Rejuvenation Committee (RRC) convened on 14.12.2018.
  RRC reviewed draft action plans of polluted river stretches of Priority I prepared by Maharashtra PCB. It was decided by the all the committee members, to take review of local bodies and accordingly to communicate the outcomes of the meeting to the Hon’ble NGT, Principal Bench. Maharashtra PCB submitted nine draft action plans of polluted river stretches of Priority I to CPCB along with minutes of 1st meeting of RRC and submitted progress report of polluted river stretches to Hon’ble NGT on 15.12.2018

- 2nd Meeting of River Rejuvenation Committee (RRC) convened on 09.01.2019.
  RRC reviewed draft action plans of polluted river stretches of Priority II prepared by

Maharashtra PCB. It was decided in the meeting to add in the draft action plans funding details like source, name of scheme, timeline etc for proposed STPs by concern local bodies.

- 3rd Meeting of River Rejuvenation Committee (RRC) convened on 23.01.2019.
  RRC reviewed and finalised draft action plans of polluted river stretches of Priority I, II, III, IV and V prepared by Maharashtra PCB. RRC also decided to call the local bodies and review the timelines proposed in action plans from time to time.

- Maharashtra PCB submitted 53 draft action plans of polluted river stretches of Priority I, II, III, IV and V to CPCB along with minutes of 2nd & 3rd meeting of RRC and submitted progress report of polluted river stretches to Hon'ble NGT on 31.01.2019.CPCB Task Team on Polluted River Stretches called MPCB to give presentation on Action Plan for Priority-I & II polluted river stretches on 12.02.2019. Accordingly, the presentations were reviewed by Task team & few improvements in the action plan were suggested.

- 4th Meeting of River Rejuvenation Committee (RRC) held on 16/02/2019 & it was decided to communicate with Water Resource Department to maintain e-flow in the rivers of Maharashtra adopting good irrigation practices, protection & management of flood plain zone (FPZ), rain water harvesting, ground water charging, planation on both sides of river, Setting up of biodiversity parks on flood plains by removing encroachments and Urban Development department communicated to take necessary steps to provide adequate funds to urban local bodies for installation of sewage treatment & MSW processing facilities in a time bound manner so as to comply with the Hon'ble NGT.

- 5th Meeting of River Rejuvenation Committee (RRC) held on 25/06/2019. It was decided that Director Environment will communicate with Water Resource Department and Urban Development Department regarding provision of funds in time bound manner for installation of STPs & MSWM facilities. RRC reviewed and approved Action Plans for restoration of polluted river stretches in priority III, IV & V.

- 6th Meeting – Meeting of River Rejuvenation Committee (RRC) held on 05/11/2019. Discussed issue about funds & implementation in time bound manner of STPs & MSWM facilities.

- 7th Meeting – 28.03.2025 – In this meeting issue of Panchganga River was not discussed. Issue of Pawana river was discussed.

Achievable goal:

The objective/goal of the action plan is that the quality of river water should meet with the required value as given under:-

Quality Parameter	Standard to be achieved
BOD	3.0 mg/l.
Dissolved Oxygen (DO)	More than 5.0 mg/l.
Faecal Coliform	Less than 500 MPN/100ml.

1.2 Background

The Panchganga River is a major tributary of Krishna River, with which it joins at Narsobawadi. It flows through the borders of Kolhapur. It originates from Prayag Sangam (Village: Chikhli, Taluka: Karveer, Dist:Kolhapur). The Panchganga is formed, as has been noted already, by four streams, the Kasari, the Kumbhi, the Tulsi and the Bhogawati. Local tradition believes in an underground stream Saraswati which together with the other four streams make the Panchganga. From Kolhapur the Panchganga River falls into the Krishna at Kurundvad. The topography of Kolhapur city shows many undulations and the ground is generally sloping from south to north towards the Panchganga River.

The city is close to the Konkan coast which is connected by 12 Ghats going through Western Ghats like Anuskura, Amba, Phonda, Amboli etc.



Figure 1 Stretch of Panchganga River

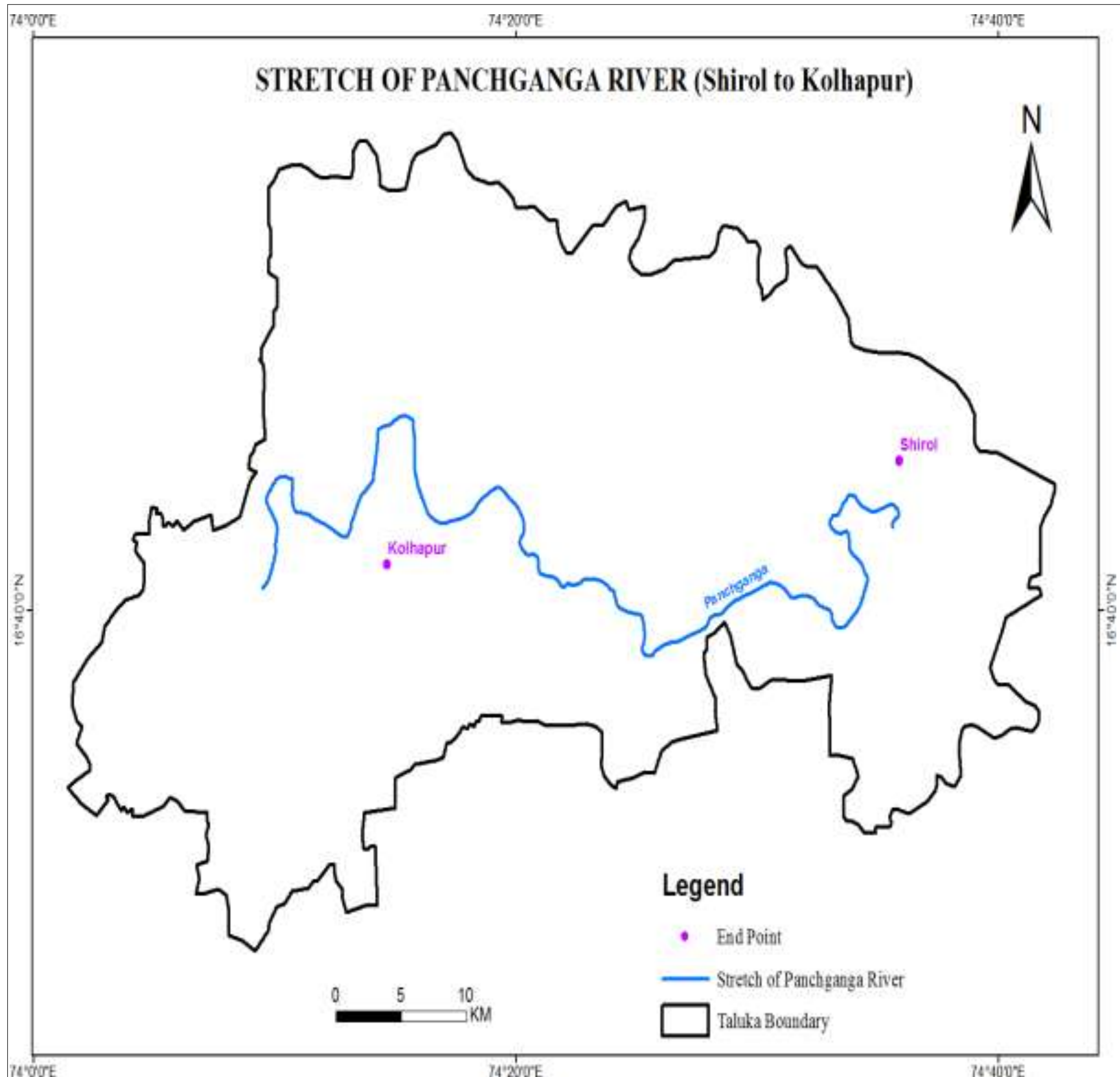


Figure 2 Map Showing Stretch of Panchganga River

The river stretch extends from Shirol to Kolhapur. The length of this stretch is 67 km. Kolhapur and Ichalkaranji towns are situated on the banks of the river. The population along this stretch is approx. 17,75,000 as per 2011 Census.

The status of the river as per the monthly sampling conducted between January to December 2024 reveals that water quality of the river meets bathing standards i.e. max BOD less than 3 mg/l.

Table 1 Introduction of river stretch

<table>
<tr><th>Sr. No.</th><th>Description of item</th><th>Details</th></tr>
<tr><td>1</td><td>Approx. length of stretch</td><td>67 Km</td></tr>
<tr><td>2</td><td>Major Towns located on the bank along with Population</td><td><table><tr><th>Local Body</th><th>Population</th></tr><tr><td>Kolhapur</td><td>6,07,419</td></tr><tr><td>Ichalkaranji</td><td>2,92,060</td></tr></table></td></tr>
<tr><td>3</td><td>Stretch of River Perennial or Non Perennial</td><td>Non - perennial</td></tr>
<tr><td>4</td><td>Status of polluted river stretch (Jan – Dec 2018)</td><td>Meets bathing standards</td></tr>
</table>

1.3 Status of Domestic Sewage Generation and Treatment

There are about 174 villages in the river Panchganga basin in Kolhapur with a total population of approx. 8.75 lakhs. Most of these villages do not have any form of treatment technology for treating the wastewater generated and thus further join the river contributing to the pollution in direct and indirect ways. 38 villages have been classified as major polluting villages by Zilla Parishad. These have population of approximately 4.34 lakhs. The Liquid Waste Management Project (LWM) supported by NABARD and Eco Development Plan (EDP) covers 6 and 2 villages out of the 38 polluting villages respectively.

The population in the villages varies from less than 5000 up to more than 20,000. Thus it is necessary to treat the wastewater generated in the villages before its subsequent disposal/re-use for agriculture. Since the villages have scattered population, therefore decentralised system of treatment for wastewater is suitable technology in the current scenario.

The total volume of waste water generated from these villages is 23896 cu. m (*Source: Primove Report on 'Pollution Abatement for Panchganga River', # - villages included in Liquid management Project by NABARD, @- villages included in Eco development Plan GoM*)

Table 2 Domestic sewage aspects on the river stretch

Sr. No.	Particular	Remarks
1	Proposal for utilization of sewage	The Infrastructure Projects are mandated by MPCB to recycle 60% of treated sewage for secondary use by providing duel pipeline. The Local Bodies will be encouraged to reuse treated sewage for various purposes including to Thermal Power Plants wherever possible. e.g. Koradi TPS is receiving 100 MLD of treated sewage from Nagpur city.
2	STP sludge management	STP sludge is disinfected and used as manure.

3	Proposal for ground water recharging/rain water harvesting	• Water resource department, GoM has prepared integrated State Water Plan, which includes recycling of Treated sewage. • MPCB has submitted Action plan for Utilization of Treated Sewage to CPCB, in which it is mandated to utilize treated sewage for different class of users like Thermal Power Plants, Industrial Units, Construction activities, non-potable municipal uses, Agriculture-Irrigation, etc. depending on its availability. • The Infrastructure Projects are mandated by MPCB to recycle 60% of treated sewage for secondary use by providing duel pipeline. • The Local Bodies will be encouraged to reuse treated sewage for various purposes including to Thermal Power Plants wherever possible. e.g. Koradi TPS is receiving 100 MLD of treated sewage from Nagpur city.
4	Adopting good irrigation practices	Agriculture Department, GoM & Water Resource Department, GoM is requested for implementation.
5	Protection and management of Flood Plain Zones (FPZ)	Water Resource Department, GoM is requested for implementation.
6	Plantation on both sides of the river	Water Resource Department, GoM is requested for implementation.
7	Setting up of biodiversity parks on flood plains by removing encroachment	Water Resource Department, GoM is requested for implementation.

Table 3 Details of Sewage Generation & treatment from respective Corporation & Council

Sr. No.	Corporation/ Council/ Zila Parishad	Sewage Generation (MLD)	Treatment Capacity (MLD)
1	Kolhapur Municipal Corporation:	149.1	106.7
2	Ichalkaranji Municipal Council	40	20
3	Other villages (ZP)	19.69	No Treatment

Table 4 Details of Proposed Sewage Treatment Plant

Name of ULB	Status of STP	Name and Address of STP	Designed Capacity (MLD)	Fund Allocation Details				Time line for various stages of work Completion	Target date of Completion
				Source of Funds	Allocation Status	Utilization status	Present Status of the work		
Kolhapur Municipal Corporation	Proposed	Dudhali area, Kolhapur.	6 MLD	AMRUT scheme costing Rs. 70.77 crores is administratively approved vide Govt. G.R. no. 27/UD-33, dated 01/07/2017 for KMC. The components of the scheme are Sewage network for Dudhali zone (112.9 KM), 6 MLD additional STP at Dudhali nala, 4 MLD additional STP at Kasaba Bawada, I & D work of Kasaba Bawada nala & related works. The work order for the above mentioned components is issued to M/s Noble Construction company, Pune on dtd. 24/10/2017. MJP is working as a project Management Consultant for the AMRUT scheme of which the work is in progress.		In process	The hydraulic design of STP is completed by the agency, inlet networking pipeline work is in process.	NA	Expected to complete on 31st May, 2025
Kolhapur Municipal Corporation	Proposed	1. Near SSC Board Kolhapur 2. Bapat Kamp Kolhapur 3.Muskuti Talav Kolhapur	**9 MLD** **15 MLD** **19.50 MLD**			In process	Under construction.	NA	Expected to complete on 31st August 2026
Ichalkaranji Municipal Council	Proposed	Ichalkaranji proposed STP at Takawade ves	18	Central-60%, state-20%, ULB-20%	Central-49.56 crore, state-16.52 crore, ULB-31.44 crore	Rs.50.83 Crores spent	Under construction 6	out of 97 km total sewerage lines,71 km sewerage lines are laid, trial bores at STP site is completed, remaining work is in progress.	May-2025

1.4 Status of Industrial Effluent Generation and Treatment

Maharashtra is one of the most highly industrialized states in India. With a rise in industrial estates in the State, areas like Mumbai, Thane, Navi Mumbai, Kalyan, Nashik, Pune and Pimpri-Chinchwad that have a large number of pollution-prone industries are facing chronic industrial pollution.

In order to maintain a safe distance between industrial units and rivers to avoid discharge of effluent into water bodies, the State has its policy which also states that no industry will be allowed to establish along a river bank. Industries are being encouraged to recycle and reuse waste. The industrial statistics of Pune region are given in the table below.

Pune		
LSI	**MSI**	**SSI**
493	291	7101
1270	563	4608
1323	322	3637
White - 203		

Kolhapur is home to many industries like sugar, tannery, gold, silver, textiles among many others. Tannery, Hand sizing, Gold & Silver Units are some small scale industries which do not have treatment system. MPCB has given closure notice to some of these industries and had asked Kolhapur Municipal Corporation to take appropriate steps.

Table 5 Particulars of Industries in Kolhapur District

Sr. No.	Category of Industries	No of Industries	Remarks
1	Orange	1574	• There are total 106 nos of industries located in the Panchganga river basin having major industrial effluent generation, split-up of the same is as follows: 1. **Sugar Industries:** 08 nos. 2. **Distillery Units:** 07 nos. 3. **Textile units:** 81. 4. **Other units:** 10. 5. **CETPs:** 03 nos. • All effluent generating units have provided their own ETP and are members of CETP wherever applicable. There is about 18 MLD of industrial waste water generation for which industries have provided individual ETPs and 03 CETPs. MPCB do not allow any industry to discharge effluent to the river. • All 08 sugar industries, 07 distilleries and 02 CETPs have provided OCEMS.
	Red	1407	
2	No. of Directions issued to Industries		**Show Cause Notice (SCN):** 133 (2022-24) 100 (2024-25) **Proposed Direction:** 42 (2022-24) 100 (2024-25) **VCD:** 31 (2022-24) 20 (2024-25) **Conditional Direction:** 31 (2022-24) 20 (2024-25)
3	Total industrial effluent generation		Industrial Effluent Generation: Approx 18 MLD
4	No. of industries having captive ETPs and their treatment capacity in MLD		106 effluent generating industries have captive ETPs

5	No. of CETPs existing in the catchment of the polluted river stretch and the treatment capacity	03 nos having capacities of 12 MLD, 1 MLD and 10 MLD
6	Gaps in treatment of industrial effluent	No Gaps
7	OCEMS installation Status by Industries	All 08 sugar industries, 07 distilleries and 03 CETPs have provided OCEMS.
8	Status of Hazardous Waste Generation and Treatment	There are 192 Hazardous waste generating industries in Kolhapur district. These industries generated about 23783 MT Hazardous waste in year 2024-25. The HW from Kolhapur district is scientifically disposed through Maharashtra Enviro Power Ltd., MIDC Ranjangaon, Dist. Pune. CHWTSDF capacity – Landfill – 60000 MT/A, Incineration – 3 TPA.

Table 6 Details of Textile Industries

Sr. No.	Name of the Industry	Capacity of Waste water Generation (m^3/day)	Capacity of Installed Effluent Treatment Plant (m^3/day)	Treatment Provided	Disposal Treatment
1	Tessitura Monti India Pvt. Ltd.	1600	1450-1500	Primary, Secondary & Tertiary	-
2	Jubilee Pvt. Ltd	500	-	Primary	Common Hazardous Waste Treatment Storage & Disposal Facility (CHWTSDF)
3	Manpassand Textile processors Pvt. Ltd	300-325	-	Primary	-
4	Ichalkaranji textiles Pvt. Ltd.	25	-	Primary	CHWTSDF
5	Ramgopal Birla textile industry	30	-	Primary	-

Source: Study to Assess the Kolhapur-Ichalkarnaji Sewage Pollution of Panchganga River, Maharashtra by NEERI

Table 7 Details of Sugar Industries

Sr. No.	Name of the Industry	Capacity of Waste water Generation (m^3/day)	Capacity of Installed Effluent Treatment Plant (m^3/day)	Treatment Provided	Disposal Treatment
1	Chattrapati Rajaram Sakar kharkhana	400-500	-	Primary, Secondary & Tertiary	-
2	Kumbhi Kasari Sakhar Kharkhana	360-380	-	Primary, Secondary & Tertiary	-
3	D.Y. Patil Sahakari Sakhar Karkhana	210	-	Primary, Secondary & Tertiary	-
4	Bhogawati Sugar Industry	-	-	Primary & Secondary	
5	Dutt Dalmiya sugar Industry	200	-	Primary & Secondary	-
6	Ratna panna sugar factory	500	-	Primary & Secondary	-
7	Dutta nagar sugar factory, Shirol	510	-	Primary & Secondary	-
8	Jawahar Sugar Industry	700-750	-	Primary & Secondary	-

Source: Study to Assess the Kolhapur-Ichalkarnaji Sewage Pollution of Panchganga River, Maharashtra by NEERI

Table 8 Highly Polluting Industries in Maharashtra as on 31/3/2025. (Kolhapur is at Sr no 5)

Industry	Amravati	Aurangabad	Chandrapur	Kalyan	Kolhapur	Mumbai	Nagpur	Nashik	Navi Mumbai	Pune	Raigad	Thane	Grand Total
Cement	-	-	5	-	1	-	1	-	-	-	-	-	7
Distillery	1	15		-	17	-	1	22	-	36	-	-	92
Dyes and Dye-intermediates	-	-	2	3	2	-	1	-	1	-	7	2	18
Fertilizer	1	2	-	-	-	1	1	4	-	1	3	-	13

Integrated Iron and Steel	-	-	1	-	1	-	4	-	-	1	2	-	9
Oil Refinery	-	-	-	-	-	2	-	-	-	-	-	-	2
Pesticide	-	-	-	1	5	-	-	1	3	-	3	3	16
Pharmaceuticals	-	13	-	12	4	-	-	2	15	9	14	23	92
Pulp & Paper	-	-	1	-	-	-	-	-	-	1	-	-	2
Sugar	1	55	2	-	41	-	5	35	-	63	-	-	202
Tannery		1	-	-	-	-		-	-	-	-	-	1
Thermal Power Plant	2	1	7	-	2	1	12	3	-	-	-	1	29
Petro-chemical	-	-	-	-	-	-	-	-	1	-	5	-	6
Grand Total	5	87	18	16	73	4	25	67	20	111	34	29	489

1.5 Drains out-falling into River Panchganga

There are total 21 drains that falls into the River Panchganga (12 from Kolhapur MC, 02 from Ichalkaranji MC & 07 other major drains). Many of which carry untreated domestic sewage generated from villages along the river. Details of these drains are given in the table below:

Table 9 Particulars of drains falling into the river

Sr. No.	Location	Name of the drain	Discharge (max)	Length (km)	Width (m)	Depth (m)
1	Near Shiv Mandir, Lakshtirth vasahat, Kolhapur.	Lakshtirth Nalla, Kolhapur	0.2	2.5	0.5	0.5
2	In front of Khanvilkar Petrol Pump, Kolhapur.	Jayanti Nalla, Kolhapur	65	9	6	2

3	At Dudhali, Kolhapur.	Dudhali Nalla, at Dudhali, Kolhapur.	24	2	3	1.5
4	Near Mahadev Temple, Kolhapur.	Jamdar Club Nalla	0.4	4	1	1
5	Juna Budhwar Peth, Kolhapur.	Siddharth Nagar Nalla	0.1	1	1	1
6	In front of CPR hospital, Near Dasara Chowk, Kolhapur.	CPR hospital Nalla,	0.5	1.5	1	1
7	Backside of Tarabai Park, Kolhapur.	Rajhans Nalla	1	1.2	1	1
8	New Palace area Kolhapur.	Ramanmala Nalla	1	1.8	1	1
9	West side of Ramanmala Javdekar Scheme, Kolhapur.	Dream World Nalla	0.3	1.4	1	1
10	Line Bazar area Kasabab Bawada, Kolhapur.	Line Bazar Nalla	3	1.3	1	1
11	Near Golibar Maidan, Kasaba Bawada, Kolhapur	Kasaba Bavada Nalla	0.2	0.7	1	1
12	At Bapat Camp, Kolhapur	Bapat Camp Nalla	0.5	2	1	1
13	Near Dr. Babasaheb Ambedkar Buddha Vihar, Ichalkaranj.	Kala Odha Nalla	32	6	6	4
14	At Chandur Ichalkaranji	Chandur Nalla,	7	5	2	1.5
15	At Gandhinagar, Tal: Karveer, Dist: Kolhapur	Gandhinagar Nalla	1.115	0.5	1	1
16	Near Birdev Mandir, Valiwade, Tal: Karveer, Dist: Kolhapur	Valiwade Nalla,	0.389	0.6	1	1
17	Tilawani/Rui, Tal: Hatkanangale, Dist: Kolhapur.	Tilawani/Rui Nalla	1.148	5.26	1	1
18	At Kabnur, Ichalkaranji. Tal:	Kabnur Nalla (Including	7	9.69	2	1.5

	Hatkanangale, Dist: Kolhapur.	Chandur nalla)				
19	Hupri, Tal: Hatkanangale, Dist: Kolhapur.	Hupri Nalla,	1.8	4.8	1	1
20	Shirdhon, Tal: Shirol, Dist: Kolhapur.	Shirdhon Nalla,	0.9	0.728	1	1
21	At Shirol, Tal: Shirol, Dist: Kolhapur.	Shirol Nalla.	1	1.57	1	1

Table 10 Status of water quality of the drains

Sr. No.	Major Drain	Major Drain	BOD (mg/l)	COD (mg/l)
1	Lakshtirth Nalla, Kolhapur	Lakshtirth Nalla, Kolhapur	-	-
2	Jayanti Nalla, Kolhapur	Jayanti Nalla, Kolhapur	26.0	90.0
3	Dudhali Nalla, at Dudhali, Kolhapur	Dudhali Nalla, at Dudhali, Kolhapur	19.8	77.0
4	Jamdar Club Nalla (Phulewadi)	Jamdar Club Nalla	3.8	24.0
5	Siddharth Nagar Nalla (Juna Budhwar Peth)	Siddharth Nagar Nalla	38	172.0
6	CPR hospital Nalla,	CPR hospital Nalla,	89.0	248.0
7	Rajhans Nalla	Rajhans Nalla	14.0	50.0
8	Ramanmala Nalla	Ramanmala Nalla	16.0	70.0
9	Dream World Nalla	Dream World Nalla	10.0	40.0
10	Line Bazar Nalla	Line Bazar Nalla	12.0	48.0
11	Kasaba Bavada Nalla	Kasaba Bavada Nalla	28.0	98.0
12	Bapat Camp Nalla	Bapat Camp Nalla	21.0	66.0
13	Kala Odha Nalla	Near Takawade Ves Pumping Station, At Ichalkaranji, Tal: Hatkanangale, Dist: Kolhapur.	132.0	397.0
14	Chandur Nalla,	Chandur Nalla, At Chandur, Tal: Hatkanangale, Dist: Kolhapur.	20.0	88.0
15	Gandhinagar Nalla	Gandhinagar Nalla, near Yuvraj High school, Gandhinagar	240.0	612.0
16	Valiwade Nalla.	Near Birdev Mandir, Valiwade, at Valiwade	-	-

17	Tilawani/Rui Nalla	Near Rui Bandhara, At Rui, Tal: Hatkanangale, Dist Kolhapur.	120.	384.0
18	Kabnur Nalla	Kabnur/Chandur Nalla, At Chandur, Tal: Hatkanangale, Dist: Kolhapur.	20.	88.0
19	Hupri Nalla	Hupri Nalla, At Hupri, Tal: Hatkanangale, Dist Kolhapur	-	-
20	Shirdhon Nalla	Shirdhon Nalla, At Shirdhon, Tal: Shirol, Dist Kolhapur	-	-
21	Shirol Nalla.	Shirol Nalla, At Shirol, Tal: Shirol, Dist Kolhapur	-	-

1.6 Status of Water Quality

Water quality of River Panchganga is assessed at one location. It is observed that Dissolved Oxygen range between 4.8 – 7.2 mg/1 putting together data of three years (2023-25) which is meeting the criteria limit for maximum of at least 4 mg/l. The Bio-chemical Oxygen Demand (BOD) varies between 1.8 – 5.2 mg/1 for similar years which is exceeding the desired level of 3 mg/1 for maximum values. The Chemical Oxygen Demand (COD) values ranged between 12.0-48.0 mg/l indicating low level of industrial pollution. The Fecal and Total Coliform numbers respectively for the years referred are in the range of 5-94 MPN/100ml and 46-350 MPN/100ml indicating significant contribution of untreated sewage. The details of parameter specific concentration are provided in the Table 11.

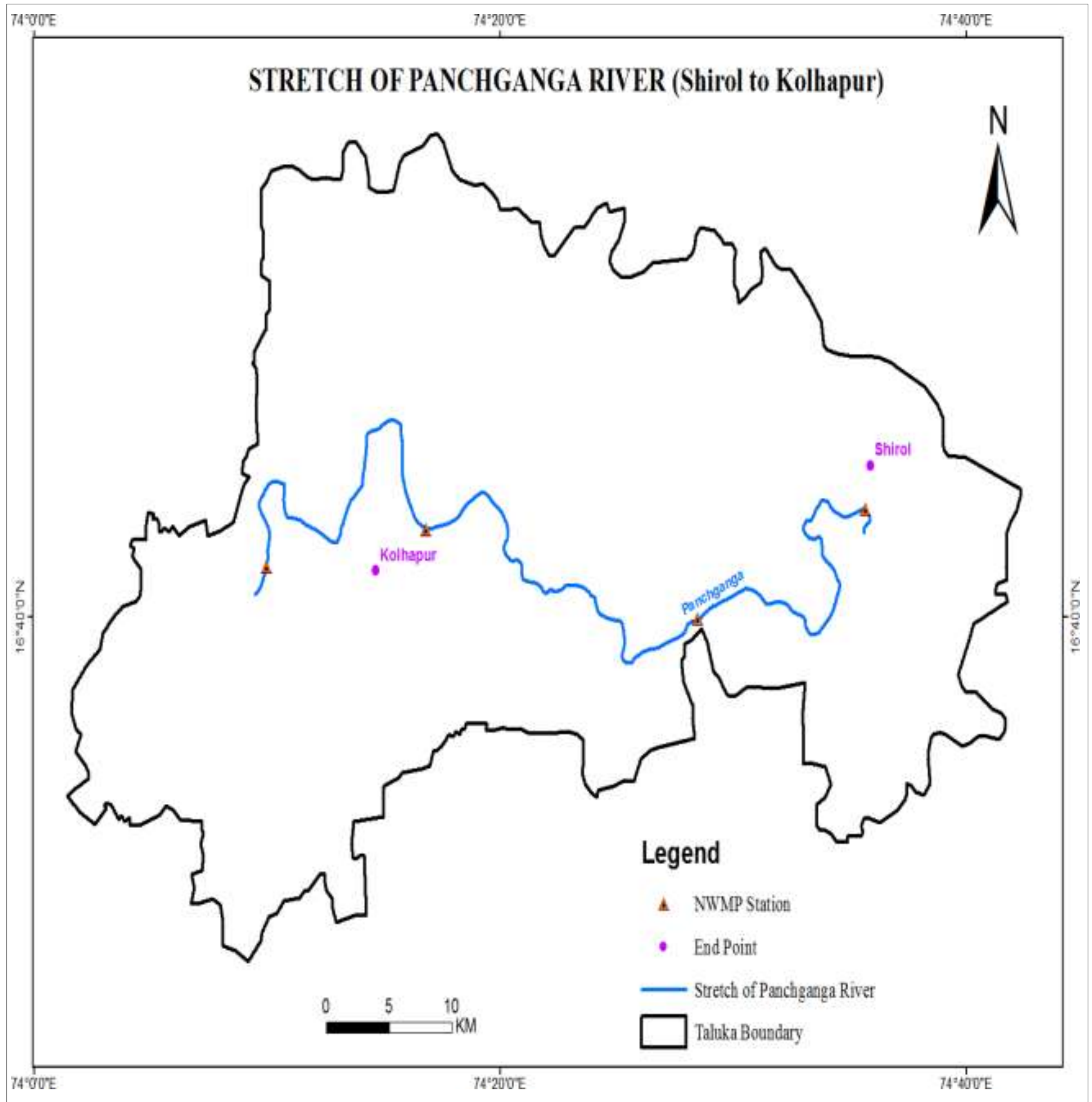


Figure 3 Map Showing NWMP Station across Panchganga River

Table 11 Water Quality for Panchganga River

Locations	Year	Parameters									
		pH		Dissolved Oxygen (Mg/l)		B.O.D. (mg/l)		C.O.D. (mg/l)		Fecal Coliform (MPN/100 ml)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Panchganga River at Shirol near Shirol intake well	2022	7.1	8.1	5	7.3	1.4	2.4	14.4	29.6	5.6	9.3
	2023	7.6	8.5	5.4	7.7	1.8	3	8	35.2	4	9.3
	2024	7.5	8.8	5.4	7.4	2.8	3.4	8	32	4.5	8.2

Locations	Year	Parameters				
		pH	Dissolved Oxygen (Mg/l)	B.O.D. (mg/l)	C.O.D. (mg/l)	Fecal Coliform (MPN/100 ml)
		Average	Average	Average	Average	Average
Panchganga River at Shirol near Shirol intake well	2022	7.76	6.33	1.98	18.1	6.47
	2023	8.12	6.58	2.38	17.17	7.02
	2024	7.98	6.61	3.13	14.67	6.1

Table 12 Water Quality at U/s of Kolhapur town near Balinga Pumping Station

Locations	Year	Parameters									
		pH		Dissolved Oxygen (Mg/l)		B.O.D. (mg/l)		C.O.D. (mg/l)		Fecal Coliform (MPN/100 ml)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Panchganga River at Balinga Pumping Station	2022	7.1	8.3	5.7	7.3	1.8	2.2	14.4	24	4	12
	2023	7.4	8.1	5.3	7.8	1.8	3	8	17.6	6	11
	2024	7.3	8.7	4.5	7.4	2.6	3.1	8	36	4	9.2

Locations	Year	Parameters				
		pH	Dissolved Oxygen (Mg/l)	B.O.D. (mg/l)	C.O.D. (mg/l)	Fecal Coliform (MPN/100 ml)
		Average	Average	Average	Average	Average
Panchganga River at Balinga Pumping Station	2022	7.55	6.58	1.9	18.7	5.75
	2023	7.87	6.81	2.4	13.67	7.45
	2024	7.7	6.56	2.93	13.83	6.02

1.7 Status of Ground Water Quality

Maharashtra Pollution Control Board (MPCB) regularly monitors the water quality across 250 Water Quality Monitoring Stations (WQMS) for both surface (155 on rivers, 34 on sea/creeks, 10 on drains, 1 dam) and ground water (24Borewells, 24 Dugwell, 1 Handpumps, 1 Tubewell) under two programs of NWMP (National Water Monitoring Programme) project titled GEMS (Global Environment Monitoring System) and MINARS (Monitoring of Indian National Aquatic Resources). Surface water samples are monitored every month whereas the ground water samples are monitored every six months.

WQI for ground water

MPCB monitors ground water quality once in six months. Based on the stringency of the parameters and its relative importance in the overall quality of water for drinking purposes each parameter has been assigned specific weightage by CPCB. These weights indicate the relative harmfulness when present in water. Nine parameters (pH, Total Hardness, Calcium Hardness, Magnesium Hardness, Chloride, Total Dissolved Solids, Fluoride, Nitrate, Sulphate) are considered for calculating Water Quality Index of ground water.

Water Quality Index - Ground Water		
WQI	**Water Quality**	**Colour Code**
<50	Excellent	
50-100	Good Water	
100-200	Poor Water	
200-300	Very Poor Water	
>300	Water Unsuitable for drinking	

Table 13 Water Quality Index for one location (ground water)

Locations	Year	Parameters								WQI	Remark
		pH		B.O.D. (mg/l)		C.O.D. (mg/l)		Fecal Coliform (MPN/100 ml)			
		Min	Max	Min	Max	Min	Max	Min	Max		
Bore well at Parvati Industrial Estate, Yadrav, Kolhapur	2024	7.6	7.7	2.8	3	10	16	5.5	7.8	197.22	Poor Water

1.8 Waste Management

1.8.1 Solid Waste Management

Total generation of MSW from Kolhapur Municipal Corporation is about 210 MT/day out of which 107 MT/day is treated by Composting, Bio Methanization, RDF, Waste to Energy (0.2 MW)

Total generation of MSW from Ichalkaranji Municipal Council is about 140 MT/day. 40 MT/day is treated by composting and the rest 100 MT/day by dumping.

1.8.2 Bio-medical waste Management

Total Bio-medical waste generation in Kolhapur district is 1700 kg/day. All waste is collected, transported and treated at CBMWTSDF located at Nature In Need, K.Bawda,Kolhapur. The CBMWTSDF has installed capacity of Incinerator 150 Kg/Hr, shredder of capacity 150 kg/hr and Autoclave with installed capacity of 50 litre/cycle.

1.8.3 E-Waste management

- Maharashtra Pollution Control Board awarded work order to M/s. IRG Systems South Asia Pvt. Ltd. to carry out inventorisation of E-Waste generation in the State of Maharashtra.
- Interim inventorisation report is prepared. CPCB has approved EPR of 261 producers for Maharashtra. The list of the producers is enclosed here.
- Annual report for the year 2024-25 is submitted.

Action Taken by MPCB

- MPCB is undertaking regular monitoring of EPR Authorization conditions and regular inspection of the collection points/ centers mentioned in EPR Plan.
- MPCB has issued Directions u/s 5 of the Environment (Protection) Act, 1986 read with E- waste (Management) Rules, 2016 to all Municipal Corporations in Maharashtra for provision of collection centres.
- Co-ordination with Various State Government Departments
- Co-ordination with Urban Local Bodies (Municipal Committee /Council /Corporation).
- Awareness through Public Notice

Constraints:

- Channelization E-waste from informal sector to formal sector.
- Awareness about impact of E-waste on Environment and Rules of E-waste is required.
- Authorized collections and Segregation centers are required to be established by Local Bodies.

1.8.4 Hazardous Waste Management

The state of Maharashtra has four Common Hazardous Waste Treatment, Storage and Disposal Facilities. These facilities are located at MIDC Taloja, Trans-Thane Creek Industrial Area, MIDC Ranjangaon, Pune and MIDC Butibori, Nagpur. These facilities collectively handle 340,847 MT of Hazardous waste per annum.

There are 192 Hazardous waste generating industries in Kolhapur district. These industries generated about 23783 MT Hazardous waste in year 2024-25.

The HW from Kolhapur district is scientifically disposed through Maharashtra Enviro Power Ltd., MIDC Ranjangaon, Dist. Pune.
CHWTSDF capacity – Landfill – 60000 MT/A, Incineration – 3 TPA.

In Kolhapur, out of the 23783 MT generation in 2024-25, 17181 MT was Landfillable, 3191 MT was Incinerable and 3410 MT was Recyclable.

Table 14 Status of Waste Management in Kolhapur District

Sr. No	Particular	Remarks
1	Total MSW Generation	**Kolhapur Municipal Corporation:** MSW Generation : 210 MT/day **Ichalkaranji Municipal Council:** MSW Generation: 140 MT/day
2	Existing MSW treatment and disposal facilities	**Kolhapur Municipal Corporation:** MSW Treatment: 107 MT/day by Composting, Bio Methanization, RDF, Waste to Energy (0.2 MW) Dumping: 93 MT/day **Ichalkaranji Municipal Council:** MSW Treatment: 40 MT/day by composting Dumping: 100 MT/day
3	Bio-medical waste Management	Hospitals are joined to Nature In Need, K.Bawda,Kolhapur **Kolhapur District:** Total Biomedical waste generated: 1700 kg/day. Total Biomedical waste treated: 1700 kg/day
4	E-Waste management	E-waste generated by industries is sent to MPCB authorized E-waste reprocessor.
5	Hazardous Waste Management	• There are 192 Hazardous waste generating industries in Kolhapur district. These industries generated about 23783 MT Hazardous waste in year 2024-25.

		• The HW from Kolhapur district is scientifically disposed through Maharashtra Enviro Power Ltd., MIDC Ranjangaon, Dist. Pune. • CHWTSDF capacity – Landfill – 60000 MT/A, Incineration – 3 TPA.

1.9 Greenery Development Plan of Forest Department, Government of Maharashtra

For maintaining the transparency, accountability and credibility, all the data relating to site selection for plantation with Geo-Tagging, development of Nurseries, digging of pits, availability of manpower, actual plantation and survival of the trees planted etc. is uploaded on the Digital Platform of Forest Department so that people can access the· data at any given point of time. This has helped to build confidence amongst the people and their ever increasing participation in the plantation programme.
For the registration of plantation by the individuals, private NGOs and other stakeholders of society the mobile application called "My Plants" has been developed. Similarly, the programs like "Saplings at the Door Step", "Digital visibility on social media", "publicity campaign" are being implemented for greater public participation.

The Forest Department is trying it's level its level best to increase the Forest and Tree cover in the State by various innovative ideas by involvement of people in the plantation & its protection especially on Non-Forest areas as forest area is limited. Massive tree plantation program in urban & rural areas under the scheme "Nurturing Trees is Worshiping Nature" has been launched by the Govt. in line with Ranmala Village in Khed Taluka of Pune District.

The Tree based Agriculture under Mahatma Gandhi National rural Employment Guarantee Scheme (MG-NREGS) Kanya Van Samruddhi Yojana, Bhausaheb Phundkar Horticulture Plantation Programme in co-ordination with Agriculture Department, Sericulture Plantation in coordination with Textile Department, Riverside Plantation are some of scheme initiated for increasing green cover in the Non- Forest areas.

1.10 Plan for Restoration of Water Quality

Table 15 Time Bound Action Plan for Panchganga River

Sr. No.	Target/Action Plan Expected	Agency / Organization	Expected Duration for Implementation
1	Provide STP for treatment of sewage generation from cities and villages along the river to avoid contamination of River	ULB/ZP	2 Years
2	Provide Effective MSW treatment Facility in the villages/towns located on the bank of river to avoid contamination of River	Concern Grampanchayat and Zilha Parishad	1.5 Years

3	In-Situ Nallah clean-up Treatment to stop untreated sewage entering into the River	Kolhapur Municipal Corporation & Ichalkaranji Municipal Council	6 Months
4	To stop bathing in river water & open defecation at bank of river. Also, proper disposal of human excreta and sewage.	Local Body & Police Department.	4-5 Months
5	Regular cleaning of river bed and regular flow monitoring should be initiated.	Local Body & Irrigation Department.	Continuous
6	To prevent growth of Algae/Eicchornia in river bed by installation of floating rafters and screen bars.	Local Body & Irrigation Department.	Continuous
7	Organize awareness programs about environment pollution	Kolhapur Municipal Corporation & Ichalkaranji Municipal Council	6 Month
8	Common toilets should be constructed in all areas to be covered. Stop open deification and awareness program should be conducted in these areas	Kolhapur Municipal Corporation & Ichalkaranji Municipal Council	10 Months
9	Vehicle, cloths, animal wash should be stopped on the bank of river and awareness program should be conducted in river bank areas	Kolhapur Municipal Corporation & Ichalkaranji Municipal Council	6 Month
10	For biomedical solid waste, prepare a plan for collection, treatment & disposal.	Kolhapur Municipal Corporation & Ichalkaranji Municipal Council	6 Month

Proposed plans for maintaining e-flow: River flows only in Monsoon season & whenever dam water is released. The amount of water released from dam is such that it will not over flow from next weir at the downstream

Recommendations:

1. All domestic sewage should be properly treated and its entry into river water should be prevented. The treatment can be carried out as follows:
   a. For small villages (population less than 1000) -– root zone technology, phytoremediation techniques
   b. For small villages or municipal councils (Population 1000 to 10000) – underground drainage system (100%) can be developed.
   c. For towns and cities (Population more than 10000) – underground drainage system (100%) can be developed.

2. Agricultural runoff
    a. Care should be taken to restrict the entry of banned chemical pesticides on the market.
    b. Agriculture department should take necessary actions to control the use of chemicals in the fields.
    c. Awareness should be created among the farmers on the use of chemicals in the fields.
3. Religious and other activities causing pollution
    a. All Local self-Government Bodies are supposed to build special permanent water bodies: Visarjan Kund's for the purpose of idol immersion but none of the bodies have carried out their duties.
    b. It is essential to create awareness, build special kunda for the idol immersion or come up with other feasible alternatives for this purpose.
    c. Separate Raksha kund needs to be built for cremation ash disposal. Moreover electric cremation units are needed to be installed in clusters, cities and people should be made aware of its use.
4. The river has several non-point injections of domestic sewage flowing from the cities which is the major cause of river pollution. In order to avoid this, it is important to formulate strict regulations and monitoring to ensure the river does not get polluted due to man-made activities.
5. Monitoring stations must be increased so that all major areas are covered and the river water quality in such areas is known.
6. Non-point source discharges in river should be stopped. These flows can be treated before they join the river through in-situ treatment methods.
7. No industrial wastewater discharges should be allowed intentionally or unintentionally in any condition. Strict action should be taken against such polluting industries.
8. Activities such as washing clothes, bathing, and immersing organic materials for religious rituals must be discouraged.
9. The lakes in the city should be rejuvenated so that their water quality and aesthetics do not deteriorate. Systems such as floating wetlands can be used in treating the lake water. No untreated wastewater must be disposed in the lake.
10. Both the cities of Kolhapur and Ichalkaranji have inadequate sewerage network and treatment facilities that allow wastewater to directly get discharged into the river thus polluting the river to a considerable extent.
11. The nallas in Kolhapur and Ichalkaranji should be diverted to the closest wastewater treatment facility and treated effectively before disposal.
12. The treatment of the wastewater should be monitored closely with effective disinfection by MPCB and respective Municipal Corporation/Council.
13. Installation of RENEU (Restoration of nallah with ecological units) for the treatment of running sewage in the drain without disturbing shape /structure of nallah.

14. Functioning of STPs should be checked through proper monitoring. A laboratory should be setup within the plant to test for important parameters and also carry out jar tests in case the system does not perform upto the set standards. Important parameters should be analysed in daily routine.
15. Disinfection is necessary to reuse wastewater safely for irrigation.
16. In-situ treatment of wastewater flowing in the nallas by installing phytorid technology.
17. Setting up of environment cell at KMC and IMC can be useful in tackling the environmental issues seen in the city. These cells should employ individuals with different scientific background with the aim of making the city self-sustainable.
18. Proper operation & maintenance is the key in improving the efficiency of the plant.
19. All the CETP units should be tested once a month for their optimal performance, this shall not only help in understanding the issues faced by treatment system but will also aid in taking suitable actions without further delay and the individual industrial wastewater treatment facilities should be subjected to higher level of treatment to meet the standards.
20. The online systems should also be installed in the outlet of every member industry to monitor the flow and quality of wastewater sent to CETP for treatment.
21. The villages must have an improvised septic tank for primary treatment of wastewater/sewage generated at source before it overflows to join any of the designed treatment units.
22. Solid waste management for each village must have regular collection, segregation of wastes, recycling of reusable materials and composting of biodegradable wastes must take place. Proper allotment of land for such important activities should be undertaken with priority.
23. Segregation of solid wastes (Dry waste & Wet waste) at source is a very crucial step for efficient management of MSW.
24. Wastewater must not be released in municipal gutter or nallas. They should be recycled and reused within the company premises.
25. The design of gates provided to the K.T. Weirs should be modified to release the water from the bottom so that the sedimentation at the bottom can be minimized
26. Provision of adequate treatment facilities in time bound manner
27. Provision of sewer network ensuring 100% collection of wastewater
28. Recycle and reuse of treated effluents from STPs for irrigation. Water used for irrigation can be diverted to river for maintaining the flow.
29. Sewage entry into the lake should be prevented. Treatment systems like Florafts along with algal removal can help in improvement of lake water quality.
30. Interception and diversion of nallas to sewage treatment plants should be done. No flows except for storm water in monsoon should flow through nallas.
31. Wherever it is difficult to lay sewer lines, decentralized wastewater treatment should be implemented. The treated wastewater can be reused for irrigation purposes. Phytorid is one such system that does not require electricity or pumping for treating sewage to optimal standards
32. The flow measurement in nallas should be carried out on monthly basis to quantify the organic load entering the river.

33. Villages should be provided with proper sanitation system through provision of toilets and septic tank along with wastewater treatment systems and the households should be provided with modified designs of septic tanks.
34. Zilla Parishad should take time bound steps in providing sanitation system to villages in both cities.
35. In Kolhapur, site for scientific landfill should be acquired at the earliest.
36. The solid waste must be properly segregated so that the biodegradable waste can be used for composting and non-biodegradable waste can be sent for recycling.
37. De-sludging should be carried out regularly in order to get the desired quality of effluent.
38. Sugar industries must comply the zero discharge standards and the effluents from the sugar industries after adequate treatment should be applied over agricultural land in sugarcane fields.
39. Specific directions must be given to sugar industries to reduce their water consumption and subsequent effluent generation.
40. CETP should be provided to treat effluents generated from small scale industries such as tannery, jewellery, etc.
41. Industries should also be note the same regarding treatment of wastewater plant & reuse the wastewater for their needs and drain treated water for societal domestic purposes.
42. Accurate calculations for water & wastewater to be done from all areas from city & villages.
43. Installation of online monitoring system for water quality & GIS platform for creating & maintaining database.
44. Awareness programs should be conducted on a regular basis to create awareness among the people highlighting importance of health, sanitation, and cleanliness.

Table 16 Timelines for Implementation of Restoration Plan

Activities/Year	2023	2024	2025	2026	2027	2028
Reconnaissance Survey						
Water Quality Sampling						
Preparation of Action Plan						
Propose and Execution (Setting up of STPs & MSWM system)						
Dudhali area, Kolhapur.						
Kasabab Bawada, Kolhapur						
Ichalkaranji proposed STP at Takawade						
Augmentation of River Flow if any and restoration of water quality						